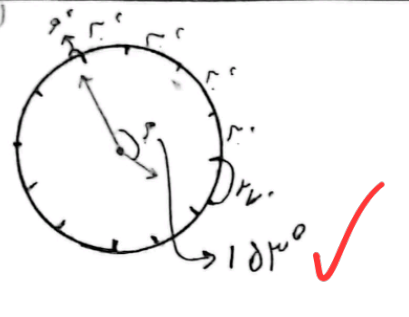
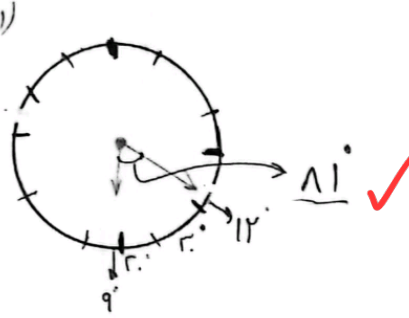


الف)  ✓ 180°	✓ $8,8m - 2h = 20V$ $24 - 2V = 182$ ✓ ②	۱
الف)  ✓ 11°	✓ $8,8m - 2h = 11$ ②	۲
الف) $S = \frac{\alpha}{r} R^2 = \frac{9\pi}{12} = \frac{3\pi}{4}$ ✓ ب) $P = \alpha R + 2R = 9 + \frac{\pi}{r}$ ✓		۳
الف) $S = \frac{bc \sin A}{r} = 10\sqrt{3}$ ✓ ب) $a = \sqrt{b^2 + c^2 - 2bc \cos A} = \sqrt{49} = 7$ $P = a + b + c = 7 + 8 + 2 = 17$ ✓		۴
$\hat{B} + \hat{C} = 108^\circ \Rightarrow \hat{A} = 72^\circ$ $\frac{a}{\sin A} = \frac{b}{\sin B} \Rightarrow \frac{10}{\sin 72^\circ} = \frac{10\sqrt{2}}{\sin B} \Rightarrow \sin B = \frac{\sqrt{2}}{2} \Rightarrow B = 45^\circ$ (مورد اول است) $\hat{A} = 72^\circ, \hat{B} = 45^\circ, \hat{C} = 108^\circ$ $\hat{B} = \frac{\pi}{4}, \hat{C} = 108^\circ \times \frac{\pi}{180} = \frac{7\pi}{12}$ ✓		۵

$$\frac{\tan(\pi - \alpha) + r \tan(\alpha + \alpha)}{\tan(r\alpha - \alpha) - \tan(r\alpha + \alpha)} = \frac{-\tan \alpha + r \tan \alpha}{-\tan \alpha - \tan \alpha} = \frac{r \tan \alpha}{-r \tan \alpha} = -1 \quad \checkmark$$

۲

$$\frac{\sin \alpha + \cos \alpha}{\sin \alpha - \cos \alpha} + \frac{\sin \alpha - \cos \alpha}{\sin \alpha + \cos \alpha} = r$$

$$\downarrow$$

$$\frac{(\sin \alpha + \cos \alpha)^r + (\sin \alpha - \cos \alpha)^r}{\sin^r \alpha - \cos^r \alpha} = r$$

$$\downarrow$$

$$\frac{\sin^r \alpha + \cos^r \alpha + \sin^r \alpha - \cos^r \alpha + r \sin \alpha \cos \alpha - r \sin \alpha \cos \alpha}{\sin^r \alpha - 1 + \sin^r \alpha} = r$$

$$\dot{r} = 4 \sin^r \alpha - r \sin^r \alpha = \frac{8}{4}$$

$$\downarrow$$

$$c \cdot \dot{r} = \frac{1}{4}$$

$$\downarrow$$

$$\tan^r \alpha = 8 \quad \checkmark$$

۲

$$\left. \begin{aligned} \tan V_0^\circ &= c \cdot t \frac{\pi}{14} \\ \tan 10^\circ &= -c \cdot t \frac{\pi}{14} \\ \tan 190^\circ &= -\tan \frac{\pi}{14} \\ \tan 100^\circ &= \cot \frac{\pi}{14} \end{aligned} \right\} \Rightarrow A = \frac{r \tan V_0^\circ + \tan 10^\circ}{r \tan 190^\circ + \tan 100^\circ} = \frac{c \cdot t \frac{\pi}{14} - c \cdot t \frac{\pi}{14}}{-r \tan \frac{\pi}{14} - c \cdot t \frac{\pi}{14}}$$

$$\Rightarrow A = \frac{\frac{1}{a}}{-ra - \frac{1}{a}} = \frac{1}{-ra^2 - 1} = -\frac{1}{ra^2 + 1} \quad \checkmark$$

۲

$$\frac{1 - c \cdot \dot{r} \sin \alpha}{\sin^r \alpha + c \cdot \dot{r} \sin \alpha} = r \Rightarrow \frac{r - r \cos^r \alpha}{c \cdot \dot{r} \sin \alpha} = 1 \Rightarrow r \cos^r \alpha = r \Rightarrow c \cdot \dot{r} \sin \alpha = \frac{r}{v} \Rightarrow \sin^r \alpha = \frac{0}{v}$$

$$\Rightarrow \tan^r \alpha = \frac{8}{4} \quad \checkmark$$

۲

$$الف) \cos(r\alpha, \delta) = \sqrt{\frac{1 + \cos 2\delta}{2}} = \sqrt{\frac{1 + \frac{4}{5}}{2}} = \sqrt{\frac{r + \sqrt{r}}{r}} = \frac{\sqrt{r + \sqrt{r}}}{r} \quad \checkmark$$

$$ب) \sin(r\alpha, \delta) = \sqrt{\frac{1 - \cos 2\delta}{2}} = \sqrt{\frac{1 - \frac{4}{5}}{2}} = \sqrt{\frac{r + \sqrt{r}}{r}} = \frac{\sqrt{r + \sqrt{r}}}{r} \quad \checkmark$$

۲

$$c \cdot \dot{r} \sin \alpha = \frac{1 + \cos 2\alpha}{r}, \sin^r \alpha = \frac{1 - \cos 2\alpha}{r} \leftarrow \text{طبقه را از این فرموله فرست}$$